Availability of Plant Materials

Generation Zero (G0) seed (equivalent to Breeder seed) will be maintained by the NRCS James E. “Bud” Smith Plant Materials Center near Knox City, Texas. Field production (G1) seed for grower increase will soon be available through the Texas Foundation Seed Service (TFSS) in Lockett, Texas, phone number (940) 552-6226.

Where to Obtain Information

Contact your local Natural Resources Conservation Service Office at the USDA Service Center for more information or visit the web at: http://Plant-Materials.nrcs.usda.gov to find more information on solving conservation problems using plants.

USDA-NRCS
James E. “Bud” Smith
Plant Materials Center
3776 FM 1292
Knox City, Texas 79529-2514
Phone: (940) 658-3922

January 2008

USDA-NRCS
Plant Materials Center
3776 FM 1292
Knox City, Texas
79529

NRCS Natural Resources Conservation Service

United States Department of Agriculture
Natural Resources Conservation Service
Plant Materials Center

Plains Germplasm Prairie Acacia

A conservation plant selected
by the NRCS
James E. “Bud” Smith Plant Materials Center, Knox City, Texas

Plains Germplasm

prairie acacia

Acacia angustissima

Plains Germplasm is released as select class of certified seed (naturally selected track)

Origin

Plains Germplasm prairie acacia is a composite of seventeen accessions and was originally collected from seed of several native plants from different eco-regions in Texas. Range of elevation for each of the seed collection sites was approximately 200 to 2550 feet. The soils at the collection sites were clay, shallow clay, gravelly, silty clay, and clay loam. The average precipitation from the collection sites was between 14 to 44 inches per year.

Potential Uses

Plains Germplasm may provide ground cover vegetation for critically eroding areas to reduce soil erosion and improve water quality. It is a hardy and drought tolerant plant that is useful for revegetation of land disturbed by mining or road construction. The native legume is high in crude protein, nutritious, palatable and readily eaten by all classes of livestock at early growth stage. Limited palatability may result in excessive growth. It is browsed by deer. Being a prolific seed producer, quail and other birds utilize the seed for food and the vegetation cover is a component for wildlife habitat.

Plant Description

Plains Germplasm is a native, perennial, warm-season, hardy, deep taprooted legume. It is a smooth and small rounded shrub, forming colonies by means of woody rhizomes with aerial stems that are thornless and rarely over three feet tall. The plant has an attractive and delicate fern-like foliage which closes at night and when touched. Stems are thin, usually unbranched, glabrate, and ridged. Leaves are alternate, the blade divided into usually 3-12 pairs of segments, these again divided into 6-20 pairs of tiny leaflets. Flowers are small and white to creamy yellow. It has 5 petals and numerous stamens, congested in rounded terminal clusters on long stalks arising from upper leaf axils. Fruit is a brownish flat seed pod 1.6 to 2.8 inches long and 0.25 to 0.3 inch wide. Plant is similar in appearance to Illinois bundleflower, *Desmanthus illinoensis*, but the fruit and leaf structures are different.

Area of Adaptation

Plains Germplasm is adapted throughout parts of Texas and southern Oklahoma. It requires at least 14 inches of annual precipitation for production, but may be produced successfully in areas of lower precipitation if irrigated.

Establishment

Plains Germplasm can be established by direct seeding or transplanted from seedlings. If direct seeding, seedbed preparation should begin the year prior to a scheduled spring seeding. The site should be prepared during the early fall prior to establishment to create a firm, weed-free seedbed. Tillage should be completed in the fall to allow time for the site to settle and accumulate moisture before the spring planting.

Plains Germplasm prairie acacia seed is best planted using a grass drill at a depth of .5 to .75 inch in the soil and then compacted for good seed and soil contact. Broadcasting the seed after tracking the ground with a bulldozer is another planting method used in undulating terrain. The seeding rate is 5 pounds per acre of Pure Live Seed (PLS) with the proper inoculant mixed with seed. There are approximately 22,600 seeds per pound.

If transplanting seedlings in small areas watering would be necessary during the first growing season for establishment.

Management

Plan a grazing management system for Plains Germplasm prairie acacia growing in pasture or rangeland. It has the ability to spread by seed and rhizomes, but can be controlled by disking or using the proper foliar herbicide. It will decrease under misuse or heavy grazing. These plants with their round white flowers that appear in the summer into fall are attractive to bees, butterflies and birds, and have potential for aesthetic landscaping.

Plains Germplasm starts growth in spring and will remain green until frost. This plant is a highly palatable legume with high crude protein herbage. It also forms a symbiotic association with rhizobial bacteria, which convert nitrogen from the air to build up nitrogen in the soil.